Each of the independent claims 1 and 14 specify an arrangement in an integrated network switch for selective layer 3 switching. In particular, each of the independent claims specify two tables that store switching entries, namely a first table (claim 1), referred to in claim 14 as an address table, that is configured for storing switching entries for respective layer 3 network addresses (e.g., IP addresses as specified in claim 1). Each of the independent claims also specify a second table (claim 1), referred to in claim 14 as a *subnetwork* table, that is configured for storing switching entries for respective *subnetwork identifiers*. Hence, each of the independent claims specify a first table storing switching entries that include layer 3 network addresses, and a second table configured for storing switching entries for respective prescribed *subnetwork identifiers*.

Moreover, each of the independent claims specify searching the second table (subnetwork table) for a corresponding switching entry storing the subnetwork identifier (*that is within the prescribed layer 3 packet information*) based on a determined absence of the corresponding switching entry storing the layer 3 destination address.

Hence, each of the independent claims specify that the first table is searched for a corresponding switching entry that stores the layer 3 address; if the layer 3 address is determined to be absent from the first table (the address table), the subnetwork table is searched *based on the subnetwork identifier*.

Hence, an IP frame can still be broadcast to an appropriate destination subnetwork, even though the host identifier within the destination IP address is unknown (see, e.g., page 9, lines 28-32).

Further, the term "subnetwork identifier" within an IP address is well recognized to refer to a specific portion of the IP address that is *distinct* from network address and the host address. As described on page 7, lines 5-7 of the specification, the IP address is *partitioned* into: 1) a *network identifier field*; 2) a *subnetwork identifier field*; and 3) a *host identifier* field. Hence, the claimed "subnetwork identifier" is *distinct* from the network identifier and the host identifier.

These and other features are neither disclosed nor suggested in the applied prior art.

As admitted in the Official Action, Hegde does not disclose first and second tables as claimed. Moreover, Hegde neither discloses nor suggests any desirability or any need for the claimed second table having prescribed subnetwork identifiers, because Hegde already explicitly specifies that the packet is forwarded to the CPU for locating the necessary forwarding information.

Hegde consistently and repeatedly describes that if an entry is not present in a flow table 70 (configured for storing IP addresses), in other words if the flow is "unresolved", then the switch engine 100 notifies the CPU 80 that address resolution is needed (see, e.g., Abstract at lines 7-11, column 3, lines 8-12, column 5, lines 28-39, column 6, lines 10-29, and column 11, lines 6-21). As described in detail with respect to Figure 7, if an entry for the flow source does not exist in the flow table in step S110, the CPU 80 is requested to evaluate the packet and create an entry in the flow table in step S130; if an entry for the flow destination does not exist in the flow table in step S150, the packet is broadcast on all routing domain ports in step S200 so that a node associated with the destination can be identified. The destination node, if attached to the

switch, will respond and the response packet will enable the CPU to learn of the destination node having the unknown IP address (see column 11, lines 6-21).

Hence, the Official Action fails to provide any motivation for modifying the primary reference to include Hariguchi et al., since the asserted motivation of "find a proper outgoing route to a destination" is already addressed by Hegde. Hence, there is no need to modify Hegde in order to include the teachings of Hariguchi et al. "The mere fact that the prior art may be modified in the manner suggested by the Examiner does not make the modification obvious unless the prior art suggested the desirability of the modification." In re Fritch, 23 USPQ2d 1780, 1783-84 (Fed. Cir. 1992). In re Mills, 16 USPQ2d 1430 (Fed. Cir. 1990).

In addition, assuming one skilled in the art would have been motivated to modify Hegde to include Hariguchi et al., the resulting hypothetical combination still would neither disclose nor suggest selectively searching a second table, configured for storing switching entries for respective *prescribed subnetwork identifiers*, as claimed, because Hariguchi et al. provides no teaching whatsoever of storing *subnetwork* identifiers.

Hariguchi et al. teaches a network routing table that includes routing information for either an IP network address, or an IP host address, but no IP subnetwork address. In particular, Hariguchi et al. provides no disclosure or suggestion whatsoever of storing *subnetwork* identifiers, as claimed; rather, Hariguchi et al. describes only network addresses and host addresses.

For example, Hariguchi et al. describes that the "network portion of the address is often referred to as the IP network address. The entire IP address is usually referred to as the IP host

address" (col. 1, lines 43-47). Further, Hariguchi et al. specifies that "IP routing is based on either the IP network address or the IP host address. Routes specified with IP network addresses are called network routes. Routes specified with IP host addresses are called host routes. IP routers handle both network and host routes" (col. 1, lines 51-56).

Further, Hariguchi et al. specifies that in hash-based routing tables, the first of two tables is used for "host routes and stores IP host addresses and output ports." The second table is used "for network routes and stores IP network addresses and their route information." If the search of the second table fails to find a network route, the router uses the default route, if specified. (Column 2, lines 10-31).

As apparent from the foregoing, Hariguchi et al. is concerned with Internet routers that provide host routes (to IP host addresses) and network routes (to an identified network). In fact, there is no reference whatsoever to a subnetwork in Hariguchi et al..

In contrast, Hegde recognizes the need for subnetwork masks for an IP address (see, e.g., col. 14, lines 20-30). Since Hegde already provides an adequate description of finding a destination, and since Hariguchi et al. only describes routing table entries for network addresses and host addresses (but not subnetwork addresses), one skilled in the art would determine that it was unnecessary to add the teachings of Hariguchi et al.. Nevertheless, the hypothetical combination still would neither disclose nor suggest the claimed second table configured for storing switching entries for respective prescribed subnetwork identifiers.

For these and other reasons, this § 103 rejection should be withdrawn.

It is believed the remaining dependent claims are allowable in view of their dependency from the respective independent claims.

The indication of allowable subject matter in claims 7, 10, 11, 20, 21, and 25 is acknowledged with appreciation.

In view of the above, it is believed this application is and condition for allowance, and such a Notice is respectfully solicited.

To the extent necessary, Applicant petitions for an extension of time under 37 C.F.R. 1.136. Please charge any shortage in fees due in connection with the filing of this paper, including any missing or insufficient fees under 37 C.F.R. 1.17(a), to Deposit Account No. 50-0687, under Order No. 95-343, and please credit any excess fees to such deposit account.

Respectfully submitted,

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Date: December 12, 2005